## CLAIMS

## What is claimed is:

1	1. A communication apparatus for processing a transmission received from a
2	cordless device, the apparatus comprising:
3	a microcontroller unit having an input that receives a digital communication
4	packet derived from the transmission, the microcontroller unit for
5	processing the digital communication packet and further comprising:
6	an edge detection mechanism coupled to the input for detecting state
7	transitions included in the digital communication packet;
8	a timer having a first value that is read in response to the edge detection
9	mechanism detecting a first state transition, and a second value
0	that is read in response to the edge detection mechanism
1	detecting a second state transition; and
2	a central processing unit having access to the first and second values of
3	the timer, the central processing unit for determining whether a
4	valid pulse width has been received based on the first and
5	second values of the timer.
1	2. The apparatus of claim 1 wherein the valid pulse width indicates that a
2	valid start pattern of the digital communication packet has been received.
1	3. The apparatus of claim 1 wherein the valid pulse width indicates that a
2	valid stop pattern of the digital communication packet has been received.
1	4. The apparatus of claim 1 wherein the valid pulse width indicates that a
2	valid bit pattern of the digital communication packet has been received.
1	5. The apparatus of claim 1 further comprising:
2	a data report engine operatively coupled to the central processing unit, the data
3	report engine having a first data structure for declaring functionality of
4	standard keys included on a cordless keyboard, and a second data structure
5	for declaring functionality of a cordless mouse.

The apparatus of claim 5 wherein the second data structure is also for 6. declaring functionality of system control keys and consumer control keys included on a cordless keyboard.

- a data report engine operatively coupled to the central processing unit, the data report engine for, in response to receiving decoded and formatted data from the central processing unit, generating a standard data report that can be transmitted to, and understood by, a host system having no active driver
- a data report engine operatively coupled to the central processing unit, the data report engine for, responsive to status data reporting being enabled, generating a standard data report that indicates to a host system that a status data report is available from the cordless device.
- The apparatus of claim 8, wherein the status data report indicates at least one of an identity of the cordless device, a battery status of the cordless device, a profile
- The apparatus of claim 1, wherein the microcontroller unit can simultaneously process digital communication packets from a number of different communication links, each communication link associated with a different cordless device, a different microcontroller input, a different edge detection mechanism and a
- A communication apparatus for processing digital information included in a transmission received from a cordless device, the apparatus comprising:
  - a processing environment having an input that receives the digital information, the
    - an input capture mechanism coupled to the input for collecting input capture data associated with the digital information; and
    - a central processing unit having access to the input capture mechanism, the central processing unit for decoding the digital information

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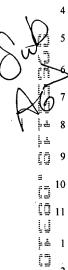
	9	based on the input capture data, and for formatting data
	10	included in the digital information; and
	11	a data report engine operatively coupled to the central processing unit, the data
	12	report engine for communicating the data a host system having no active
	13	driver corresponding to the cordless device.
•	1	12. A method for processing a digital communication packet derived from a
	2	transmission received from a cordless device, the method comprising:
	3	detecting a first state transition included in the digital communication packet;
	4	assigning a first time to the first state transition;
	5	detecting a second state transition included in the digital communication packet;
	6	assigning a second time to the second state transition; and
11 ff	7	determining whether a valid pulse width has been received based on the first and
die in in in the tea	8	second times.
4	1	13. The method of claim 12 wherein the valid pulse width indicates that a
교	2	valid start pattern of the digital communication packet has been received.
Õ	1	14. The method of claim 12 wherein the valid pulse width indicates that a
1 4	2	valid stop pattern of the digital communication packet has been received.
T., 63 6.1	1	15. The method of claim 12 wherein the valid pulse width indicates that a
L.1 1.1 11-1	2	valid bit pattern of the digital communication packet has been received.
	1	16. The method of claim 12 further comprising:
	2	responsive to determining that a number of valid pulses have been received,
	3	decoding and formatting data included in the digital communication
	4	packet;
	5	providing the decoded and formatted data to a data report engine for transmission
	6	to a host system having no active driver corresponding to the cordless
	7	device.
	1	17. The method of claim 12 further comprising:
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declaring functionality of standard keys included on a cordless keyboard so that a



the cordless device.



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a central processing unit having access to the first and second values of the timer, the central processing unit for determining whether a valid pulse width has been received based on the first and second values of the timer; and

a data report engine operatively coupled to the central processing unit, the data report engine for, in response to receiving decoded and formatted data from the central processing unit, generating a standard data report that can be transmitted to, and understood by, a host system having no active driver corresponding to the cordless device.

27. A computer program product, stored on a computer readable medium, for processing a digital communication packet derived from a transmission received from a cordless device, wherein in response to the computer program product being executed by a processor, the processor performs the steps of:

detecting a first state transition included in the digital communication packet; assigning a first time to the first state transition; detecting a second state transition included in the digital communication packet; assigning a second time to the second state transition; and determining whether a valid pulse width has been received based on the first and second times.

28. A computer program product, stored on a computer readable medium, for processing digital information included in a transmission from a cordless device, wherein in response to the computer program product being executed by a processor, the processor performs the steps of:

collecting input capture data included in the digital information;
decoding the digital information based on the input capture data;
formatting data included in the digital information; and
communicating the data to a host system having no active driver corresponding to
the cordless device.



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29. A computer program product, stored on a computer readable medium, for communicating status information from a cordless device to a corresponding driver running on a host system, wherein in response to the computer program product being executed by a processor, the processor performs the steps of:

receiving a standard data report that indicates that status reporting is enabled and status data is available to be collected for the cordless device; and

retrieving the status data, the status data including at least one of an identity of the cordless device, a battery status of the cordless device, a profile of the cordless device, and a profile code of the cordless device.

30. A computer program product, stored on a computer readable medium, for processing digital information included in a transmission from a composite cordless device, wherein in response to the computer program product being executed by a processor, the processor performs the steps of:

collecting input capture data included in the digital information;

determining whether data included in the digital information is a first data type or a second data type based on the input capture data;

communicating the first type of data to its correct destination included in a host system having no active driver corresponding to the composite cordless device; and

communicating the second type of data to its correct destination included in a host system having no active driver corresponding to the composite cordless device.

